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**Electronic measure
equipment**

KL TSP_2011_05_EN

Submersible Pressure Transmitter Type TSP with Sensor with Metal Diaphragm in Standard Variant

ASSETS AND ADVANTAGES:

- It measures liquid column of measured medium in wide range of 0 to 0,25 m...600m
- Information about value of measured liquid column in a form of analogue output (current or voltage) or with a communication line
- Integration into upper control systems with a serial line or analogue output
- Higher resistance and a robustness in variant „MILITARY“



APPLICATIONS:

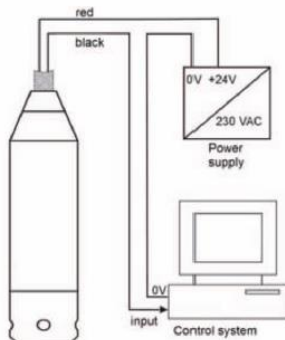
- Measurement of liquid column of groundwater in wells
- Measurement of liquid column of water in surface currents and water tanks
- Measurement of liquid column of liquids in basins and cisterns
- On request, possibility of use for special applications

Technical Data

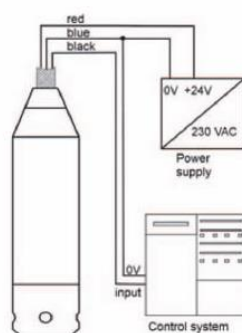
Gauging Range	0 to 0,25 m... 600 m	0 to 1 V	three-conductor plugging
Temp. of Environment	- 40 °C to + 60 °C	0 to 10 V	three-conductor plugging
Temp. of Measured Medium	- 40 °C to + 60 °C	RS-485	galvanically separated
Accuracy	0,1 % only for ranges ≥ than 1 m		other on request
	0,25 % only for ranges ≥ than 0,6 m		24 V DC / 8 V to 36 V /
	0,4 % of range		with a hard lead
Additional Thermal Error – Thermal Compensation	lower than 0,03 %/10 °C		IP 68
Long-term Stability	0,15 % of range/year		150 g
Output Signal	4 to 20 mA two-conductor plugging		Standard variant
	0/4 to 20 mA three-conductor plugging		With an integrated voltage surge barrier
			∅ 28 mm/110 mm
			∅ 28 mm/140 mm

Electrical Plugging

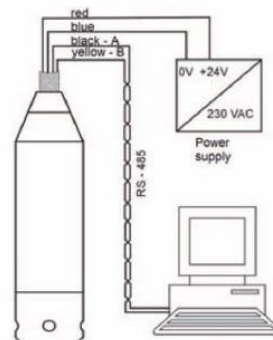
two-conductor plugging



three-conductor plugging



plugging with a communicating line RS-485





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Table n. 1 Specification of technical parameters and requirements

CODE	DESCRIPITON	
TSP	Submersible pressure transmitter with a metal diaphragm EN STN 17 352/AISI 316	
GAUGING RANGE		
0250	0...0,25 m	
0500	0...0,5 m	
1000	0...1 m	
2000	0...2 m	
3000	0...3 m	
4000	0...4 m,	
6000	0...6 m	
1001	0...10 m	
2001	0...20 m	
2501	0...25 m	
4001	0...40 m	
6001	0...60 m	
1002	0...100 m	
1602	0...160	
2502	0...250 m	
4002	0...400	
6002	0...600 m	
XXXX	Other range	
VARIANT		
S	Standard variant, into environment without a danger of explosion	
M	Military	
OUTPUT SIGNAL		
00	0 to 20 mA	three-conductor plugging
40	4 to 20 mA	two-conductor plugging
43	4 to 20 mA	three-conductor plugging
01	0 to 1 V	three-conductor plugging
10	0 to 10 V	three-conductor plugging
80	RS-485	transfer rate 300 to 9600 Bd
XX	Other output	
VOLTAGE SURGE BARRIER		
Q	Without an additional integrated voltage surge barrier	
B	With an additional integrated voltage surge barrier	
OPERATING TEMPERATURE		
0	Standard	0...+ 60 °C calibrated at 22 °C
1	Extended	- 20...+ 60 °C calibrated at 22 °C
2	In different range on request calibrated at 22 °C	
3	In different range on request calibrated at different temperature	
ELECTRICAL PLUGGING		
P	With a hard lead	
TYPE OF SURFACE ISOLATION OF HARD LEAD		
xxU	Polyurethane lead	xx length in meters
xxT	Teflon lead	xx length in meters
xxP	PVC – shielded cable	xx length in meters
ACCURACY		
W	Selection 0,1 % of range	
V	Selection 0,25 % of range	
S	Standard 0,4 % of range	
SPECIAL REQUESTS		
Q0	Without special requests	
XX	Other	

X up to XXXX – to be specified in an order

It is highly recommended to enter

- Type of the measured medium
- Required operating temperature

Example: TSP 1001 S 40 B 0 P 13U V Q0 H 0,85

Submersible pressure transmitter, range 10 m, standard variant, two-conductor plugging 4 to 20 mA, with an additional integrated voltage surge barrier, temperature compensation in range 0 to 60 °C, a hard lead long 13 m, polyurethane isolation, accuracy 0,25 % of range, density of the liquid 0,85 kg/dm³ – compound of water and alcohol



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